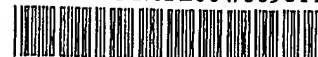


Translation

PATENT COOPERATION TREATY

PCT/JP2004/009611



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PMKA-16291	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2004/009611	International filing date (day/month/year) 30 June 2004 (30.06.2004)	Priority date (day/month/year) 11 July 2003 (11.07.2003)
International Patent Classification (IPC) or national classification and IPC G01M 3/26		
Applicant MITSUI MINING & SMELTING CO., LTD.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☒ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 08 November 2004 (08.11.2004)	Date of completion of this report 25 May 2005 (25.05.2005)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has:
- ☐ restricted the claims.
 - ☒ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☐ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
 - ☒ not complied with for the following reasons:

The matter common to the above two groups of inventions is a leakage detector for detecting liquid leakage based on a variation in the liquid level stored in a tank comprising a liquid storage section having a space for storing liquid flown in from the tank, and a flow rate measuring section for measuring the liquid flow rate. Such constitution is disclosed in the document JP, 2003-185522, A [(Mitsui Mining & Smelting Co., Ltd.), July 3, 2003 (07.03.03), Fig. 1]; therefore, it does not appear to be novel.

As a result, the above common matter does not exceed the scope of prior art; therefore, this common matter is not a special technical feature according to the meaning of PCT Rule 13.2, Paragraph 2.

Therefore, it is obvious that the above groups of inventions I and II do not satisfy the requirement of unity of invention.

4. Consequently, this report has been established in respect of the following parts of the international application:

☒ all parts.

☐ the parts relating to claims Nos. _____

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-15	YES
	Claims		NO
Inventive step (IS)	Claims	1, 3-5, 8-11, 13, 15	YES
	Claims	2, 6, 7, 12, 14	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: WO, 03/52372, A (Mitsui Mining & Smelting Co., Ltd.), June 26, 2003 (06.26.03), Page 11, line 4-page 13, line 20, page 19, lines 21-24, and page 24, lines 13-19, Fig. 20

Document 2: JP, 2002-54964, A (Mitsui Mining & Smelting Co., Ltd.), February 20, 2002 (02.20.02), Full text, all drawings & EP, 1326062, A

(1) Regarding claims 1, 3-5, 8-11, 13 and 15

A leakage detector for detecting liquid leakage based on a variation in the liquid level stored in a tank, wherein a lower end of the leakage detector is removably locked to a bottom plate of a tank, and an upper end of the leakage detector allowing a space in a liquid storage section and a tank interior to communicate with each other is vertically movably supported by a through-hole provided on a top plate of the tank is not described in any of the documents cited in the ISR; nor is it obvious to a party skilled in the art.

(2) Regarding claims 2 and 14

The inventions relating to claims 2 and 14 do not substantially differ from the leakage detector described in document 1 cited in the ISR in the point other than the presence of a revision processor. Providing a revision processor in an analyzer is merely well-known art (as for an example of a leakage detector, see document 2), and providing a revision processor in the leakage detector described in document 1 could be easily conceived of by a party skilled in the art.

Therefore, the inventions relating to claims 2 and 14 do not appear to involve an inventive step based on document 1 cited in the ISR.

(3) Regarding claim 6

In addition to preceding paragraph (2), in the indirectly heated thermal type flow rate sensor described in document 1 (see page 11, line 5), a temperature target value (see page 12, line 27) is a mere matter that could be appropriately set by a party skilled in the art.

Therefore, the invention relating to claim 6 does not appear to involve an inventive step based on document 1.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V.2:

(4) Regarding claim 7

In addition to preceding paragraph (2), performing revision processing while liquid is stopped which is when measuring is not performed, is a mere matter that could be appropriately conceived by a party skilled in the art.

Therefore, the invention relating to claim 7 does not appear to involve an inventive step based on document 1.

(5) Regarding claim 12

In addition to preceding paragraph (2), document 1 (see page 19, lines 22-24) describes opening or blocking one end of a passageway using an electromagnetic valve.

Therefore, the invention relating to claim 12 does not appear to involve an inventive step based on document 1.